



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,009	09/09/2003	Jeffrey W. Leon	85487LMB	2285
7590	10/19/2004			
			EXAMINER	
			TRUONG, DUC	
			ART UNIT	PAPER NUMBER
			1711	
DATE MAILED: 10/19/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	9
	10/658,009	LEON ET AL.	
Examiner	Art Unit		
Duc Truong	1711		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 9/13/04

2a) This action is **FINAL**.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-64 is/are pending in the application.

4a) Of the above claim(s) 1-28 and 44-64 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 29-43 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

Applicant's election with traverse of Group II in the reply filed on 9/13/04 is acknowledged. The traversal is on the ground(s) that the claims in Groups I, II and III require common elements such as polymer particles comprising vinylsulfonyl moieties, and do not require an additional search . This is not found persuasive because the search is based on different classifications of groups I, II and III and constitute an undue burden in that the search for Group I does not require the monodisperse status, as required in Group II, nor the steps of the claimed method of preparing said monodisperse polymer particle, as required in Group III.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0430371.

The reference discloses a composition comprising monodisperse beads (see Abstract) stabilized by vinylsulfonyl functionalized polymers (see page 4, line 10), wherein said vinylsulfonyl functionalized polymers are grafted to the external surfaces of said beads (see page 4, , lines 5-22).

Note that the polymers employed to form the small beads conform to the general structure -(A)<sub>o</sub>-(B)<sub>p</sub>-(D)<sub>q</sub>-

Wherein -A- represents units derived from one or more hydrophobic ethylenically unsaturated monomers (see page 4, lines 25-26, lines 35-40);

-B- represents units derived from vinylsulfonyl group (see page 5, line 9 et seq, lines 53-56);

-D- represents units derived from one or more ethylenically unsaturated monomers which are different than those represented by -A- or -B- (See page 4, lines 30-31; page 6, lines 24-34) with the molar ratios (see page 32-34) overlapping with the claimed molar ratio in that q can be 0..

Note also that said polymers have been disclosed at page 6, line 54 onto page 7, line 8) and specific monodispersed beads have been disclosed at page 9, line 50 et seq..

The reference further discloses biological receptors of interest having the requisite free amino or sulfhydryl group for covalent bonding to the small polymer beads (page 3, lines 35-end), corresponding to the claimed bioaffinity tag (claim 43).

The disclosure of the reference differs from the instant claims in that it does not disclose the claimed coefficient of variation in the particle diameter nor the claimed formula I and II.

However, the reference does disclose the requirements of the claims including specific components which are included in the claimed formula to form the product, a particle composition comprising monodisperse polymer beads. Therefore, it would have

been obvious to one of ordinary skill in the art to select reactants from the reference within the limitation of the instant claims to form the vinylsulfonyl functionalized polymers of the claimed formulas and products, monodisperse polymer particle comprising a coefficient of variation in the particle diameter, as in the claims, since they have been shown to be effective in a similar system and thus would have been expected to provide adequate results. There is no showing of unexpected results derived from said selection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Truong whose telephone number is 571-272-1081. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



\*\*\*

DUC TRUONG  
PRIMARY EXAMINER